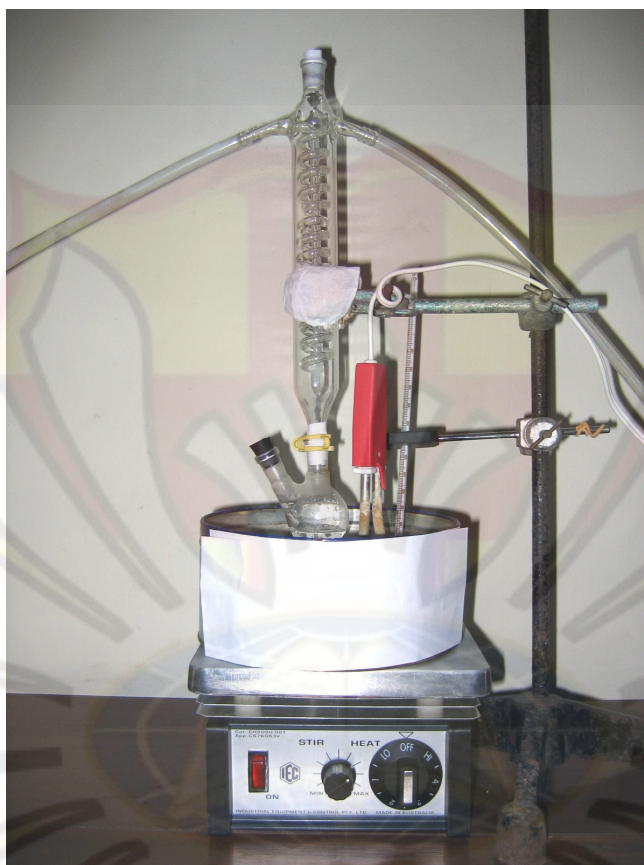


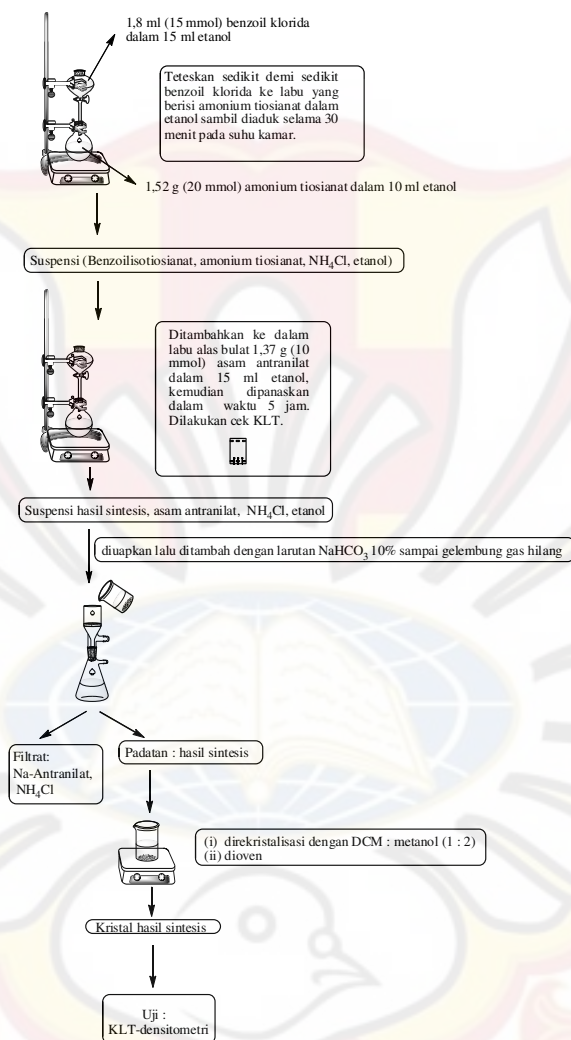
LAMPIRAN A

RANGKAIAN ALAT UNTUK SINTESIS



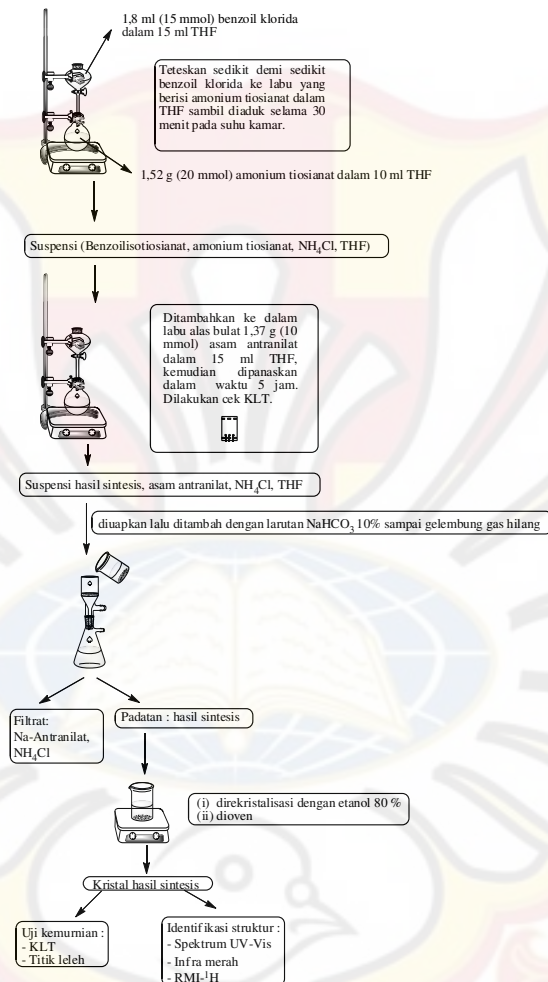
LAMPIRAN B

BAGAN ALIR SINTESIS 3-BENZOIL-2-TIOKSO-2,3-DIHIDROKUINAZOLIN-4(1H)-ON DENGAN PELARUT ETANOL



LAMPIRAN C

BAGAN ALIR SINTESIS 3-BENZOIL-2-TIOKSO-2,3-DIHIDROKUINAZOLIN-4(1H)-ON DENGAN PELARUT TETRAHIDROFURAN (THF)



LAMPIRAN D

PERHITUNGAN BERAT TEORITIS 3-BENZOIL-2-TIOKSO-2,3-DIHIDROKUINAZOLIN-4(1H)-ON DAN ASAM 2-(3-BENZOILTIOUREIDO)BENZOAT

Amonium tiosianat (BM = 76,12)

Penimbangan amonium tiosianat = 1,52 gram

$$\text{mmol amonium tiosianat} = \frac{1,52 \times 1000}{76,12} = 19,96 \text{ mmol}$$

Benzoil klorida (BM = 140,57; BJ = 1,2070)

Volume benzoil klorida = 1,80 ml

$$\text{mmol benzoil klorida} = \frac{1,80 \text{ ml} \times 1,2070}{140,57} \times 1000 = 15,43 \text{ mmol}$$

Asam antranilat (BM = 137,13)

Penimbangan asam antranilat = 1,37 gram

$$\text{mmol asam antranilat} = \frac{1,37 \times 1000}{137,13} = 9,99 \text{ mmol}$$

3-benzoil-2-tiokso-2,3-dihidrokuinazolin-4(1H)-on (senyawa I hasil sintesis) (BM = 282,32)

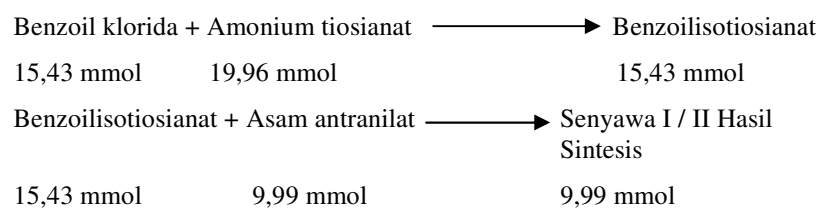
mmol teoritis = 9,99 mmol

Berat teoritis = $9,99 \times 282,32 = 2820 \text{ mgram} = 2,82 \text{ gram}$

Asam 2-(3-benzoiltioureido)benzoat (senyawa II hasil sintesis) (BM = 300,33)

mmol teoritis = 9,99 mmol

Berat teoritis (diasumsikan berat teoritis 3-benzoil-2-tiokso-2,3-dihidrokuinazolin-4(1H)-on) = 2820 mgram = 2,82 gram



LAMPIRAN E

PERHITUNGAN PERSENTASE HASIL 3-BENZOIL-2-TIOKSO-2,3-DIHIDROKUINAZOLIN-4(1H)-ON DAN ASAM 2-(3-BENZOILTIOUREIDO)BENZOAT

Perbandingan relatif luas area asam 2-(3-benzoiltioureido)benzoat : 3-benzoil-2-tiokso-2,3-dihidrokuinazolin-4(1H)-on pada sintesis dengan pelarut etanol

$$\text{Replikasi I} = 1 : 1,8$$

$$\text{Replikasi II} = 1 : 1,7$$

$$\text{Replikasi III} = 1 : 2$$

a. 3-benzoil-2-tiokso-2,3-dihidrokuinazolin-4(1H)-on

Sintesis I

Berat praktis = 1,12 gram

$$\text{Berat praktis (\%)} = \frac{1,12}{2,82} \times 100\% = 40\%$$

$$\text{Persentase hasil} = \frac{1,8}{2,8} \times 40\% = 26\%$$

Sintesis II

Berat praktis = 1,11 gram

$$\text{Berat praktis (\%)} = \frac{1,11}{2,82} \times 100\% = 39\%$$

$$\text{Persentase hasil} = \frac{1,7}{2,7} \times 39\% = 25\%$$

Sintesis III

Berat praktis = 1,13 gram

$$\text{Berat praktis (\%)} = \frac{1,13}{2,82} \times 100\% = 40\%$$

$$\text{Persentase hasil} = \frac{2,0}{3,0} \times 40\% = 27\%$$

$$\text{Rata-rata persentase hasil} = \frac{26\% + 25\% + 27\%}{3} = 26\%$$

b. Asam 2-(3-benzoiltioureido)benzoat

Sintesis I

Berat praktis = 1,12 gram

$$\text{Berat praktis (\%)} = \frac{1,12}{2,82} \times 100\% = 40\%$$

$$\text{Persentase hasil} = \frac{1}{2.8} \times 40\% = 14\%$$

Sintesis II

Berat praktis = 1,11 gram

$$\text{Berat praktis (\%)} = \frac{1,11}{2,82} \times 100\% = 39\%$$

$$\text{Persentase hasil} = \frac{1}{2,7} \times 39\% = 15\%$$

Sintesis III

Berat praktis = 1,13 gram

$$\text{Berat praktis (\%)} = \frac{1,13}{2,82} \times 100\% = 40\%$$

$$\text{Persentase hasil} = \frac{1}{3,0} \times 40\% = 13\%$$

$$\text{Rata-rata persentase hasil} = \frac{14\% + 15\% + 13\%}{3} = 14\%$$

Perbandingan relatif luas area asam 2-(3-benzoyltioureido)benzoat : 3-benzoyl-2-tiokso-2,3-dihidrokuinazolin-4(1H)-on pada sintesis dengan pelarut tetrahidrofuran

$$\text{Replikasi I} = 1 : 2,8$$

$$\text{Replikasi II} = 1 : 2,6$$

a. 3-benzoyl-2-tiokso-2,3-dihidrokuinazolin-4(1H)-on

Sintesis I

Berat praktis = 1,46 gram

$$\text{Berat praktis (\%)} = \frac{1,46}{2,82} \times 100\% = 52\%$$

$$\text{Persentase hasil} = \frac{2,8}{3,8} \times 52\% = 38\%$$

Sintesis II

Berat praktis = 1,47 gram

$$\text{Berat praktis (\%)} = \frac{1,47}{2,82} \times 100\% = 52\%$$

$$\text{Persentase hasil} = \frac{2,6}{3,6} \times 52\% = 38\%$$

$$\text{Rata-rata persentase hasil} = \frac{38\% + 38\%}{2} = 38\%$$

b. Asam 2-(3-benzoylthiourea)benzoat

Sintesis I

Berat praktis = 1,46 gram

$$\text{Berat praktis (\%)} = \frac{1,46}{2,82} \times 100\% = 52\%$$

$$\text{Persentase hasil} = \frac{1}{3,8} \times 52\% = 14\%$$

Sintesis II

Berat praktis = 1,47 gram

$$\text{Berat praktis (\%)} = \frac{1,47}{2,82} \times 100\% = 52\%$$

$$\text{Persentase hasil} = \frac{1}{3,6} \times 52\% = 15\%$$

$$\text{Rata-rata persentase hasil} = \frac{14\% + 15\%}{2} = 15\%$$